

Gridded Bathymetry Metadata (200704)

Identification_Information:

Citation:

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Originator: Joyce E. Miller, Coral Reef Ecosystem Division, NOAA Pacific Islands Fisheries Science Center, Pacific Island Benthic

Habitat Mapping Center

Publication_Date: 200609

Title: CRED Gridded 5m Bathymetry of Kingman Reef, Pacific Remote Island Areas, 2006

Geospatial_Data_Presentation_Form: raster digital data

Online_Linkage: <http://www.soest.hawaii.edu/pibhmc>

Description:

Abstract: Gridded (5 m cell size) bathymetry of the lagoon, shelf and slope environments of Kingman Reef, Pacific

Remote Island Areas, Central Pacific. Almost complete bottom coverage was achieved in depths between 3 and 3500

meters (5 m grid includes data to 300 m). The bathymetry dataset includes Simrad EM300, EM3002D, and Reson 8101ER

multibeam data collected March 29 to April 4, 2006.

Purpose: The data were collected in support of Coral Reef Conservation Program goals to map all shallow (0-30 m) coral reefs

in US Pacific waters and priority moderate (greater than 30 m) depth areas by 2009.

The data are being used to

provide bathymetric and backscatter data for previously unmapped areas; in support of ecosystem management

requirements for benthic habitat mapping and location of Essential Fish Habitat; and to study the geologic features

of the area.

Supplemental_Information: Data were collected aboard the NOAA Ship Hiialakai, a 218' United States National Oceanic and Atmospheric

Administration research ship. The NOAA Ship Hiialakai's survey sensors include a 30 kHz Simrad EM300 sonar and a

300 kHz Simrad EM3002D sonar, which provide bathymetry and imagery data, a TSS/Applanix POS/MV Model 320, which

measures position, velocity, attitude and heading, and a Seabird SBE 9/11 plus CTD used to measure sound velocity

profiles. Sensor configuration for the Hi'ialakai for cruise HI-06-04 is documented in the cruise/multibeam

metadata file HI0604_MB_Metadata.txt.

Data were also collected aboard the R/V AHI (Acoustic Habitat Investigator), a 25' survey launch owned and operated

by the NOAA Pacific Islands Fisheries Science Center in Honolulu, HI. The R/V AHI's survey sensors include a 240

kHz RESON 8101-ER sonar providing bathymetry and imagery data, a TSS/Applanix POS/MV Model 320 which measures

position, velocity, attitude and heading, and a Seabird SBE 19 CTD used to measure sound velocity profiles. Sensor

configuration for the AHI for cruise AHI-06-04 is documented in the cruise/multibeam metadata file AHI0604_MB_Metadata.txt.

Time_Period_of_Content:

Time_Period_Information:

Range_of_Dates/Times:

Beginning_Date: 20060329

Ending_Date: 20060404
Currentness_Reference: ground condition
Status:
 Progress: Complete
 Maintenance_and_Update_Frequency: As needed
Spatial_Domain:
 Bounding_Coordinates:
 West_Bounding_Coordinate: -162.485044
 East_Bounding_Coordinate: -162.329334
 North_Bounding_Coordinate: 6.458854
 South_Bounding_Coordinate: 6.374838
Keywords:
 Theme:
 Theme_Keyword_Thesaurus: CoRIS Theme Thesaurus
 Theme_Keyword: EARTH SCIENCE > Oceans > Bathymetry/Seafloor Topography > Bathymetry
 Theme_Keyword: EARTH SCIENCE > Biosphere > Aquatic Habitat > Benthic Habitat
 Theme_Keyword: EARTH SCIENCE > Biosphere > Zoology > Corals > Reef monitoring and assessment > Mapping > Habitat mapping
 Theme_Keyword: EARTH SCIENCE > Oceans > Coastal Processes > Coral Reefs
 Theme:
 Theme_Keyword_Thesaurus: None
 Theme_Keyword: AHI0601
 Theme_Keyword: Multibeam sonar
 Theme:
 Theme_Keyword_Thesaurus: CoRIS Discovery Thesaurus
 Theme_Keyword: Numeric Data Sets > Bathymetry
 Theme:
 Theme_Keyword_Thesaurus: ISO 19115:2003 MD_TopicCategoryCode
 Theme_Keyword: elevation
 Theme_Keyword: 006
 Theme_Keyword: oceans
 Theme_Keyword: 014
 Place:
 Place_Keyword_Thesaurus: CoRIS Place Thesaurus
 Place_Keyword: OCEAN BASIN > Pacific Ocean > Central Pacific Ocean > Line Islands > Kingman Reef (06N162W0001)
 Place_Keyword: COUNTRY/TERRITORY > United States of America > USA Minor Outlying Islands > Kingman Reef (06N162W0001)
 Place:
 Place_Keyword_Thesaurus: None
 Place_Keyword: Pacific Remote Island Areas
 Access_Constraints: None
 Use_Constraints: These data are not to be used for navigation purposes. Please acknowledge the NOAA Coral Reef Ecosystem Division, Pacific Islands Fisheries Science Center and the Pacific Islands Benthic Habitat Mapping Center, School of Ocean and Earth Science and Technology, University of Hawaii as the sources of this information.
 Point_of_Contact:
 Contact_Information:
 Contact_Organization_Primary:
 Contact_Organization: Pacific Islands Benthic Habitat Mapping Center, Coral Reef Ecosystem Division, PIFSC, NOAA and the Joint Institute for Marine and Atmospheric Research (JIMAR)
 Contact_Person: Joyce Miller

Contact_Address:

Address_Type: mailing and physical address

Address: 1680 East-West Road, POST 833

City: Honolulu

State_or_Province: Hawaii

Postal_Code: 96822

Country: USA

Contact_Voice_Telephone: 808-956-5239

Contact_Electronic_Mail_Address: joyce.miller@noaa.gov

Browse_Graphic:

Browse_Graphic_File_Name:

http://www.soest.hawaii.edu/pibhmc/pibhmc_pria_kingman_bathy.htm#5meter

Browse_Graphic_File_Description: Kingman Reef, 5m Gridded Bathymetry

Browse_Graphic_File_Type: JPG

Data_Set_Credit: Coral Reef Ecosystem Division (CRED), Pacific Islands Fisheries Science Center (PIFSC), NOAA and

Pacific Islands Benthic Habitat Mapping Center, School of Ocean and Earth Science and Technology, University of Hawaii

Data_Quality_Information:

Attribute_Accuracy:

Attribute_Accuracy_Report: Data are collected for resource management and research purposes and are tested for internal

consistency; however, no effort is made to compare these data to external references or to other published data.

Logical_Consistency_Report: These data are believed to be logically consistent though no tests were performed

Completeness_Report: Complete

Positional_Accuracy:

Horizontal_Positional_Accuracy:

Horizontal_Positional_Accuracy_Report: Horizontal positioning system: GPS C/A

Horizontal position accuracy: 25 meters

Vertical_Positional_Accuracy:

Vertical_Positional_Accuracy_Report: Range resolution of sonar: Variable

Raw sounding resolution: Variable

Vertical accuracy of gridded product: Approximately 1 percent of water depth

Lineage:

Process_Step:

Process_Description: Specifics of data processing are recorded in cruise metadata reports HI0604_MB_Metadata.txt and

AHI0604_MB_Metadata.txt

Process_Date: 20060401

Spatial_Data_Organization_Information:

Direct_Spatial_Reference_Method: Raster

Raster_Object_Information:

Raster_Object_Type: Grid Cell

Row_Count: 3438

Column_Count: 1842

Vertical_Count: 1

Spatial_Reference_Information:

Horizontal_Coordinate_System_Definition:

Planar:

Grid_Coordinate_System:

Grid_Coordinate_System_Name: Universal Transverse Mercator

Universal_Transverse_Mercator:

UTM_Zone_Number: 3

Transverse_Mercator:

Scale_Factor_at_Central_Meridian: 0.9996

Longitude_of_Central_Meridian: -165

Latitude_of_Projection-Origin: 0

False_Easting: 500000

False_Northing: 0

Planar_Coordinate_Information:

Planar_Coordinate_Encoding_Method: Row and Column

Coordinate_Representation:

Abscissa_Resolution: 5

Ordinate_Resolution: 5

Planar_Distance_Units: meters

Geodetic_Model:

Horizontal_Datum_Name: D_WGS_1984

Ellipsoid_Name: WGS_1984

Semi-major_Axis: 6378137.000000

Denominator_of_Flattening_Ratio: 298.257224

Vertical_Coordinate_System_Definition:

Depth_System_Definition:

Depth_Datum_Name: mean lower low water

Depth_Resolution: 0.01

Depth_Distance_Units: meters

Depth_Encoding_Method: Attribute Values

Entity_and_Attribute_Information:

Overview_Description:

Entity_and_Attribute_Overview: Depth values are real values based on the average of the soundings that fell within the extracted grid cells. The number of soundings per grid cell range from greater than 1000 soundings in shallow depths to as few as 20 soundings in deeper areas. A total error budget for this survey has not been developed.

Therefore, the accuracy of depth measurements should be considered to be within 1 per cent of water depth.

Entity_and_Attribute_Detail_Citation: none

Distribution_Information:

Distributor:

Contact_Information:

Contact_Organization_Primary:

Contact_Organization: Pacific Islands Benthic Habitat Mapping Center,CRED, PIFSC, NOAA and JIMAR

Contact_Person: Joyce E. Miller

Contact_Position: Oceanographer

Contact_Address:

Address_Type: mailing and physical address

Address: 1680 East-West Road, POST 833

City: Honolulu

State_or_Province: Hawaii

Postal_Code: 96822

Country: USA

Contact_Voice_Telephone: 808-956-5239

Contact_Electronic_Mail_Address: joyce.miller@noaa.gov

Resource_Description: n/a

Distribution_Liability: These data are not to be used for navigational purposes.NOAA makes no warranty regarding these

data, expressed or implied, nor does the fact of distribution constitute such a warranty. NOAA cannot assume liability

for any damages caused by any errors or omissions in these data, nor as a result of the failure of these data to

function on a particular system.

Standard_Order_Process:

Digital_Form:

Digital_Transfer_Information:

Format_Name: netCDF

Format_Information_Content: Binary netCDF Grid:

This file is formatted as a 2-D binary netCDF grid file. This is the default grid file format used by GMT

(Generic Mapping Tools), which created this file.

More information can be located at <http://gmt.soest.hawaii.edu> and

<http://unidata.ucar.edu/packages/netcdf/index.html> and in

http://www.ldeo.columbia.edu/res/pi/MB-System/formatdoc/gsf_spec.pdf

Digital_Transfer_Option:

Online_Option:

Computer_Contact_Information:

Network_Address:

Network_Resource_Name:

http://www.soest.hawaii.edu/pibhmc/pibhmc_pria_kingman_bathy.htm#5meter

Fees: None

Standard_Order_Process:

Digital_Form:

Digital_Transfer_Information:

Format_Name: Arc ASCII GRID

Format_Information_Content: Arc ASCII can be converted to Arc Raster using ArcToolbox Conversion Tools.

Digital_Transfer_Option:

Online_Option:

Computer_Contact_Information:

Network_Address:

Network_Resource_Name:

http://www.soest.hawaii.edu/pibhmc/pibhmc_pria_kingman_bathy.htm#5meter

Fees: None

Metadata_Reference_Information:

Metadata_Date: 20070105

Metadata_Contact:

Contact_Information:

Contact_Organization_Primary:

Contact_Organization: Pacific Islands Benthic Habitat Mapping Center, CRED, PIFSC, NOAA and JIMAR

Contact_Person: Joyce E. Miller

Contact_Position: Oceanographer

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Contact_Electronic_Mail_Address: joyce.miller@noaa.gov

Metadata_Standard_Name: FGDC Content Standards for Digital Geospatial Metadata

Metadata_Standard_Version: FGDC-STD-001-1998